

Figure 1

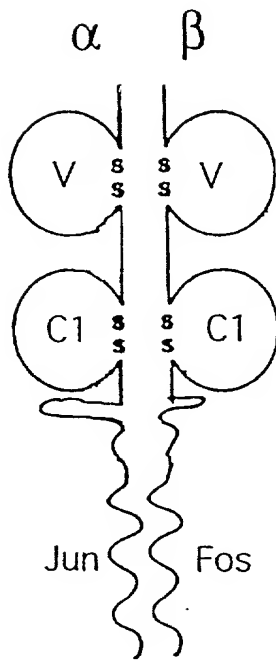


Figure 2

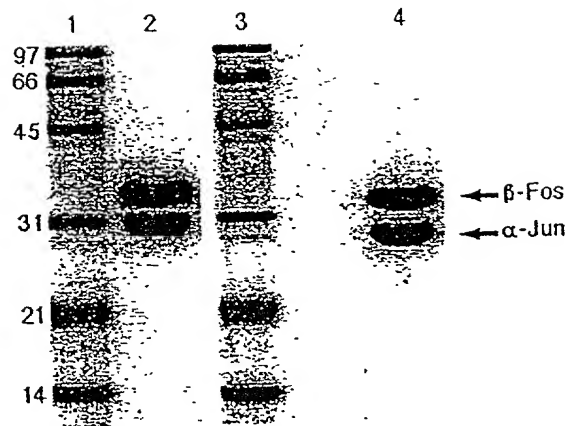


Figure 3

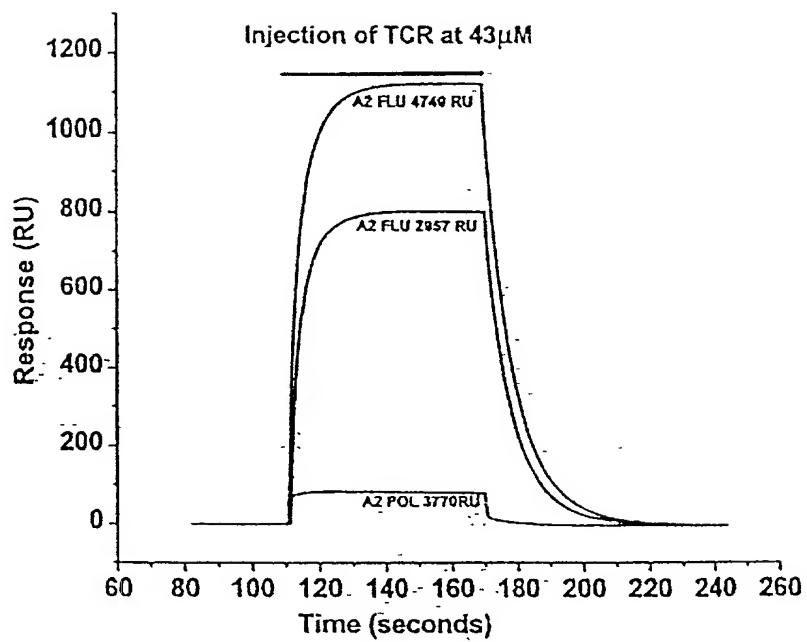


Figure 4

A

Poly-C 'anchor primer' :

Xho I

5'- TAA ATA CTC GAG GCG CGC CCC CCC CCC CCC -3'

B

TCR α chain constant region specific primer:

Xma I

5'- ATA TAA CCC GGG GAA CCA GAT CCC CAC AGG AAC TTT CTG GGC TGG GGA -3'

C

TCR β chain constant region specific primer:

Xma I

5'- ATA TAA CCC GGG GAA CCA GAT CCC CAC AGT CTG CTC TAC CCC AGG CC -3'

Figure 5

A

c-jun 5' primer:

Xma I

5' - CATACACCCGGGGGTAGAATCGCCCGGCTGGAG -3'

B

c-jun 3' primer:

Xho I

5' - GTGTGTGCTCGAGGATCCTAGTAGTTCATGACTTTCTGTTTAAGCTGTGC -3'

Bam HI

C

c-fos 5' primer:

Xma I

5' -CATACACCCGGGGTCTGACTGATACACTCCAAGCGGAG -3'

D

c-fos 3' primer:

Xho I

5' - TGTGTGCTCGAGGATCCTAGTAAGCTGCCAGGATGAACTCTAGTTTTTC -3'

Bam HI

Figure 6.

A

5' - AGA ATC GCC CGG CTG GAG GAA AAA GTG AAA ACC TTG AAA GCT CAG AAC TCG GAG CTG GCG
 R I A R L E E K V K T L K A Q N S E L A
 TCC ACG GCC AAC ATG CTC AGG GAA CAG GTG GCA CAG CTT AAA CAG AAA GTC ATG AAC TAC -3'
 S T A N M L R E Q V A Q L K Q K V M N Y

C-jun leucine zipper DNA and amino acid (one-letter code) sequences as fused to TCR alpha chains.

B

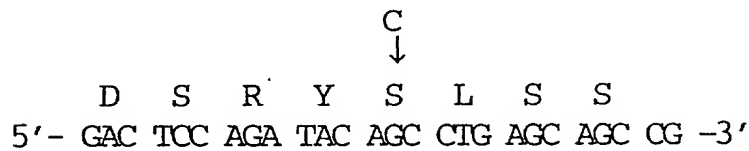
5' - CTG ACT GAT ACA CTC CAA GCG GAG ACA GAC CAA CTA GAA GAT GAG AAG TCT GCT TTG CAG
 L T D T L Q A E T D Q L E D E K S A L Q
 ACC GAG ATT GCC AAC CTG CTG AAG GAG AAG GAA AAA CTA GAG TTC ATC CTG GCA GCT TAC -3'
 T E I A A N L L K E K E K L E F I L A A Y

C-fos leucine zipper DNA and amino acid (one-letter code) sequences as fused to TCR beta chains.

Figure 7

A

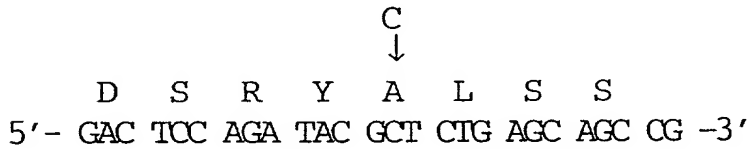
Mutation of cysteine to serine, forwards (sense) primer, indicating amino acid sequence and the mutation:

**B**

Mutation of cysteine to serine, backwards (nonsense) primer:

**C**

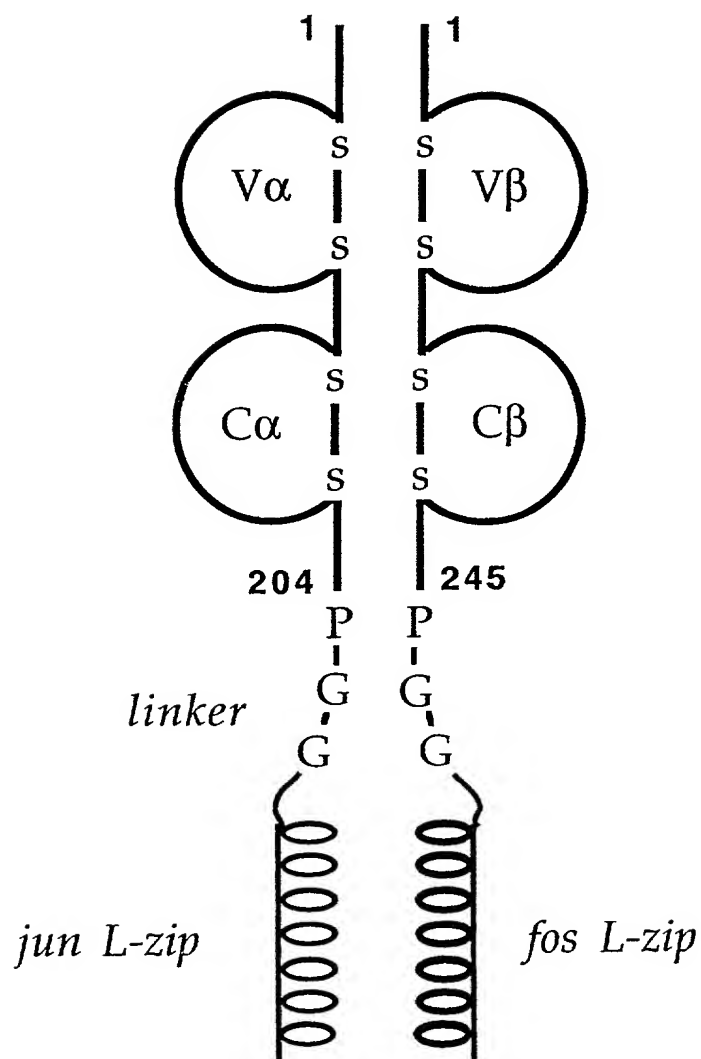
Mutation of cysteine to alanine, forwards (sense) primer, indicating amino acid sequence and the mutation:

**D**

Mutation of cysteine to alanine, backwards (nonsense) primer:



Figure 8



A
5' PCR primer for the human Vα10.2 chain of the JM22 Influenza Matrix peptide-
HLA-A0201 restricted TCR:

S I Q E
AGC ATC CAA GAG G -3'

5'- gctctagacat ATG GTG GAT GGT GGA ATC ACT CAG TCC C -3'

Nde I

5'- gctctagacat ATG GAt TcT GTt ACT CAa ATG CAa GGT CAa GTG

Nde I

T L S S
ACC CTC TCA TCA G -3'

Figure 9 (continued)

D

5' PCR primer for the mouse V β 11 chain of the Influenza nucleoprotein peptide-H2-D^b restricted TCR:

 M E P T N A G V I Q
5'- gctctagacat ATG GAa CCa ACa AAt GcT GgT GTt ATC CAA

 T P R H
ACA CCT AGG CAC -3'

E

5' PCR primer for the human V α 23 chain of the 003 HIV-1 Gag peptide-HLA-A0201 restricted TCR:

 M K Q E V T Q I
5'- ggaattccat atg AAA CAa GAG GTt ACa CAa ATT CC -3'
 Nde I

F

5' PCR primer for the human V β 5.1 chain of the 003 HIV-1 Gag peptide-HLA-A0201 restricted TCR:

 M K A G V T Q T
5'- ggaattccat atg AAa GcT GGA GTt ACT CAA ACT CC -3'

Figure 9 (continued)

G

5' PCR primer for the human V α 2.3 chain of the HTLV-1 Tax peptide-HLA-A0201 restricted A6 TCR:

M Q K E V E Q K

5' -cccccc cat ATG CAG AAG GAA GTG GAG CAG AAC -3'

Nde I

H

5' PCR primer for the human V β 12.3 chain of the HTLV-1 Tax peptide-HLA-A0201 restricted A6 TCR:

M K A G V T Q T

5' - ccccc cat ATG AAC GCT GGT GTC ACT CAG ACC -3'

Nde I

I

5' PCR primer for the human V α 17.2 chain of the HTLV-1 Tax peptide-HLA-A0201 restricted B7 TCR:

M Q Q K N D D Q Q V

5' -cccccc cat ATG CAA CAa AAa AAT GAT GAC CAG CAA GTT

Nde I

K Q N

AAG CAA AAT -3'

J
5' PCR primer for the human V β 12.3 chain of the HTLV-1 Tax peptide-HLA-A0201 restricted B7 TCR:

Q
CAG -3'

5'- cataca ccc ggg GGA ACT TTC TGG GCT GGG GAA GAA GG -3'
Xma I

5'- cataca ccc ggg GTC TGC TCT ACC CCA GGC CTC -3'
Xma I

Figure 10

TCR alfa>

M Q L L E Q S P Q F L S I Q E G E N L T
 ATGCAaCTaCTaGAaCAaAGtCCTCAGTTTCTAAGCATCCAAGAGGGAGAAAATCTCACT

V Y C N S S S V F S S L Q W Y R Q E P G
 GTGTACTGCAACTCCTCAAGTGTTTTTTCAGCTTACAATGGTACAGACAGGAGCCTGGG

E G P V L L V T V V T G G E V K K L K R
 GAAGTCTGTCTCTCGGTGACAGTAGTTACGGGTGGAGAAGTGAAGAAGCTGAAGAGA

L T F Q F G D A R K D S S L H I T A A Q
 CTAACCTTTCAGTTTGGTGATGCAAGAAAGGACAGTTCTCTCCACATCACTGCGGCCAG

P G D T G L Y L C A G A G S Q G N L I F
 CCTGGTGATACAGGCCCTCTACCTCTGTGCAGGAGCGGGAAGCCAAGGAAATCTCATCTTT

G K G T K L S V K P N I Q N P D P A V Y
 GGAAAAGGCACTAAACTCTCTGTAAACCAAATATCCAGAACCTGACCTGCCGTGTAC

Q L R D S K S S D K S V C L F T D F D S
 CAGCTGAGAGACTCTAAATCCAGTGACAAGTCTGTCTGCCTATTACCGATTTTGATTCT

Q T N V S Q S K D S D V Y I T D K T V L
 CAAACAAATGTGTACAAAGTAAGGATTCTGATGTGTATATCACAGACAAAATGTGCTA

D M R S M D F K S N S A V A W S N K S D
 GACATGAGGTCTATGGACTTCAAGAGCAACAGTGCTGTGGCCTGGAGCAACAAATCTGAC

F A C A N A F N N S I I P E D T F F P S
 TTTGCATGTGCAACGCCTTCAACAACAGCATTATTCCAGAAGACACCTTCTTCCCCAGC

<TCR alfa linker c-jun>

P E S S P G G R I A R L E E K V K T L K
 CCAGAAAGTTCCcccgggGGTAGAATCGCCGGCTGGAGGAAAAAGTGAAAACCTTGAAA

A Q N S E L A S T A N M L R E Q V A Q L
 GCTCAGAACTCGGAGCTGGCGTCCACGGCCAACATGCTCAGGGAACAGGTGGCACAGCTT

K Q K V M N Y *
 AAACAGAAAGTCATGAACACTAG

Figure 11

TCR beta>

M V D G G I T Q S P K Y L F R K E G Q N
ATGGTGGATGGTGAATCACTCAGTCCCCAAAGTACCTGTTTCAGAAAGGAAGGACAGAAT

V T L S C E Q N L N H D A M Y W Y R Q D
GTGACCCTGAGTTGTGAACAGAATTTGAACCACGATGCCATGTACTGGTACCGACAGGAC

P G Q G L R L I Y Y S Q I V N D F Q K G
CCAGGGCAAGGGCTGAGATTGATCTACTACTCACAGATAGTAAATGACTTTTCAGAAAGGA

D I A E G Y S V S R E K K E S F P L T V
GATATAGCTGAAGGGTACAGCGTCTCTCGGGAGAAGAAGGAATCCTTTCTCTCACTGTG

T S A Q K N P T A F Y L C A S S S R S Sq
ACATCGGCCCAAAGAACCCGACAGCTTCTATCTCTGTGCCAGTAGTTTCGAGGAGCTCC

Y E Q Y F G P G T R L T V T E D L K N V
TACGAGCAGTACTTCGGGCCGGGCACCAGGCTCACGGTCACAGAGGACCTGAAAAACGTT

F P P E V A V F E P S E A E I S H T Q K
TTCCCAACCGAGGTGCTGTGTTTGAACCATCAGAAGCAGAGATCTCCACACCCAAAG

A T L V C L A T G F Y P D H V E L S W W
GCCCACTGGTGTGCCTGGCCACAGGCTTCTACCCCGACCACGTGGAGCTGAGCTGGTGG

V N G K E V H S G V S T D P Q P L K E Q
GTGAATGGGAAGGAGGTGCACAGTGGGGTCAGCACAGACCCGAGCCCCTCAAGGAGCAG

P A L N D S R Y C L S S R L R V S A T F
CCCGCCCTCAATGACTCCAGATACTGCCTGAGCAGCCGCTGAGGGTCTCGGCCACCTTC

W Q N P R N H F R C Q V Q F Y G L S E N
TGGCAGAACCCCCGAACCACTTCCGCTGTCAAGTCCAGTTCTACGGGCTCTCGGAGAAT

D E W T Q D R A K P V T Q I V S A E A W
GACGAGTGGACCCAGGATAGGGCCAAACCTGTACCCAGATCGTCAGCGCCGAGGCCTGG

<TCR beta linker c-fos>

G R A D P G G L T D T L Q A E T D Q L E
GGTAGAGCAGACcccgggGGTCTGACTGATACACTCCAAGCGGAGACAGATCAACTTGAA

D K K S A L Q T E I A N L L K E K E K L
GACAAGAAGTCTGCGTTGCAGACCGAGATTGCCAATCTACTGAAAGAGAAGGAAAACTA

E F I L A A Y *
GAGTTCATCCTGGCAGCTTACTAG

Figure 12

TCR alfa>

M N Y S P A L V T V M L F V F G R T H G
ATGAACTATTCTCCAGCTTTAGTGACTGTGATGCTGTTTGTGTTTGGGAGGACCCATGGA

D S V T Q M Q G Q V T L S E D D F L F I
GACTCAGTAACCCAGATGCAAGGTCAAGTGACCTCTCAGAAGACGACTTCCTATTTATA

N C T Y S T T W Y P T L F W Y V Q Y P G
AACTGTACTTATCAACCACATGGTACCCGACTCTTTTCTGGTATGTCCAATATCCTGGA

E G P Q L L L K V T T A N N K G I S R G
GAAGGTCCACAGCTCCTTTTGAAAGTCACAACAGCCAACAACAAGGAATCAGCAGAGGT

F E A T Y D K G T T S F H L Q K A S V Q
TTTGAAGCTACATATGATAAAGGAACAACGTCCTTCCACTTGCAGAAAGCCTCAGTGCAG

E S D S A V Y Y C V L G D R Q G G R A L
GAGTCAGACTCTGCTGTGTACTACTGTGTGCTGGGTGATCGACAGGGAGGCAGAGCTCTG

I F G T G T T V S V S P N I Q N P E P A
ATATTTGGAACAGGAACACGGTATCAGTCAGCCCCAACATCCAGAAGCCAGAACCTGCT

V Y Q L K D P R S Q D S T L C L F T D F
GTGTACCAGTTAAAAGATCCTCGGTCTCAGGACAGCACCTCTGCCTGTTCACCGACTTT

D S Q I N V P K T M E S G T F I T D K T
GACTCCCAAATCAATGTGCCGAAAACCATGGAATCTGGAACGTTTCATCACTGACAAAAC

V L D M K A M D S K S N G A I A W S N Q
GTGCTGGACATGAAAGCTATGGATTCCAAGAGCAATGGGGCCATTGCCTGGAGCAACCAG

T S F T C Q D I S K E T N A T Y P S S D
ACAAGCTTCACCTGCCAAGATATCTCCAAAGAGACCAACGCCACCTACCCAGTTCAGAC

<TCR alfa linker c-jun>

V P G G R I A R L E E K V K T L K A Q N
GTTcccggtgGTAGAATCGCCCGGTGGAGGAAAAAGTGAAAACCTTGAAAGCTCAGAAC

S E L A S T A N M L R E Q V A Q L K Q K
TCGGAGCTGGCGTCCACGGCCAACATGCTCAGGGAACAGGTGGCACAGCTTAAACAGAAA

V M N Y *
GTCATGAACTACTAG

Figure 13

TCR beta>

M K A G V T Q T P R Y L I K T R G Q Q V
ATGAAAGCTGGAGTTACTCAAACCTCAAGATATCTGATCAAAACGAGAGGACAGCAAGTG

T L S C S P I S G H R S V S W Y Q Q T P
ACACTGAGCTGCTCCCCATCTCTGGGCATAGGAGTGTATCCTGGTACCAACAGACCCCA

G Q G L Q F L F E Y F S E T Q R N K G N
GGACAGGGCCTTCAGTTCTCTTTGAATACTTCAGTGAGACACAGAGAAACAAAGGAAAC

F P G R F S G R Q F S N S R S E M N V S
TTCCCTGGTTCGATTCTCAGGGCGCCAGTTCTCTAACTCTCGCTCTGAGATGAATGTGAGC

T L E L G D S A L Y L C A S S F D S G N
ACCTTGAGAGCTGGGGGACTCGGCCCTTTATCTTTGCGCCAGCAGCTTCGACAGCGGGAAT

S P L H F G N G T R L T V T E D L N K V
TCACCCCTCCACTTTGGGAACGGGACCAGGCTCACTGTGACAGAGGACCTGAACAAGGTG

F P P E V A V F E P S E A E I S H T Q K
TTCCACCCCGAGGTGCTGTGTTTGAGCCATCAGAAGCAGAGATCTCCACACCCAAAAG

A T L V C L A T G F F P D H V E L S W W
GCCACACTGGTGTGCCTGGCCACAGGCTTCTTCCCTGACCACGTGGAGCTGAGCTGGTGG

V N G K E V H S G V S Q D P Q P L K E Q
GTGAATGGGAAGGAGGTGCACAGTGGGGTCAGCCAGGACCCGCAGCCCTCAAGGAGCAG

P A L N D S R Y S L S S R L R V S A T F
CCCGCCCTCAATGACTCCAGATACAGCCTGAGCAGCCGCCTGAGGGTCTCGGCCACCTTC

W Q N P R N H F R C Q V Q F Y G L S E N
TGGCAGAACCCCCGCAACCACTTCCGCTGTCAAGTCCAGTTCTACGGGCTCTCGGAGAAT

D E W T Q D R A K P V T Q I V S A E A W
GACGAGTGGACCCAGGATAGGGCCAAACCTGTCAACCAGATCGTCAGCGCCGAGGCCTGG

<TCR beta linker c-fos>

G R A D P G G L T D T L Q A E T D Q L E
GGTAGAGCAGACCCCGGGGTCTGACTGATACACTCCAAGCGGAGACAGATCAACTTGAA

D K K S A L Q T E I A N L L K E K E K L
GACAAGAAGTCTGCGTTGCAGACCGAGATTGCCAATCTACTGAAAGAGAAGGAAAAACTA

E F I L A A Y *
GAGTTCATCCTGGCAGCTTACTAG

Figure 14

TCR alfa>

M K Q E V T Q I P A A L S V P E G E N L
ATGAAACAAGAAGTTACACAGATTCCTGCAGCTCTGAGTGTCCAGAAGGAGAAAAGTCTG

V L N C S F T D S A I Y N L Q W F R Q D
GTTCTCAACTGCAGTTTCACTGATAGCGCTATTTACAACCTCCAGTGGTTTAGGCAGGAC

P G K G L T S L L L I Q S S Q R E Q T S
CCTGGGAAAGGTCTCACATCTCTGTGTGCTTATTCAGTCAAGTCAGAGAGAGCAAACAAGT

G R L N A S L D K S S G R S T L Y I A A
GGAAGACTTAATGCCTCGCTGGATAAATCATCAGGACGTAGTACTTTATACATTGCAGCT

S Q P G D S A T Y L C A V T N F N K F Y
TCTCAGCCTGGTGACTCAGCCACCTACCTCTGTGCTGTGACCAACTTCAACAAATTTTAC

F G S G T K L N V K P N I Q N P D P A V
TTTGGATCTGGGACCAAACCTCAATGTAAAACCAAATATCCAGAACCCTGACCCTGCCGTG

Y Q L R D S K S S D K S V C L F T D F D
TACCAGCTGAGAGACTCTAAATCCAGTGACAAGTCTGTCTGCCTATTCACCGATTTTGAT

S Q T N V S Q S K D S D V Y I T D K T V
TCTCAAACAAATGTGTACAAAGTAAGGATTCCTGATGTGTATATCACAGACAAAACCTGTG

L D M R S M D F K S N S A V A W S N K S
CTAGACATGAGGTCTATGGACTTCAAGAGCAACAGTGCTGTGGCCTGGAGCAACAAATCT

D F A C A N A F N N S I I P E D T F F P
GACTTTGCATGTGCAAACGCCTTCAACAACAGCATTATTCCAGAAGACACCTTCTTCCCC

<TCR alfa linker c-jun>

S P E S S P G G R I A R L E E K V K T L
AGCCCAGAAAGTTCCcccgggGGTAGAATCGCCCGGCTGGAGGAAAAAGTGAAAACCTTG

K A Q N S E L A S T A N M L R E Q V A Q
AAAGCTCAGAACTCGGAGCTGGCGTCCACGGCCAACATGCTCAGGGAACAGGTGGCACAG

L K Q K V M N Y *
CTTAAACAGAAAGTCATGAACTACTAG

Figure 15

TCR beta>
M K A G V T Q T P R Y L I K T R G Q Q V
ATGAAAGCTGGAGTTACTCAAACCTCCAAGATATCTGATCAAAACGAGAGGACAGCAAGTG
T L S C S P I S G H R S V S W Y Q Q T P
ACACTGAGCTGCTCCCCCTATCTCTGGGCATAGGAGTGTATCCTGGTACCAACAGACCCCA
G Q G L Q F L F E Y F S E T Q R N K G N
GGACAGGGCCTTCAGTTCCCTCTTTGAATACTTCAGTGAGACACAGAGAAACAAAGGAAAC
F P G R F S G R Q F S N S R S E M N V S
TTCCCTGGTTCGATTCTCAGGGCGCCAGTTCTCTAACTCTCGCTCTGAGATGAATGTGAGC
T L E L G D S A L Y L C A S S F D S G N
ACCTTGGAGCTGGGGGACTCGGCCCTTTATCTTTGCGCCAGCAGCTTCGACAGCGGGAAT
S P L H F G N G T R L T V T E D L N K V
TCACCCCTCCACTTTGGGAACGGGACCAGGCTCACTGTGACAGAGGACCTGAACAAGGTG
F P P E V A V F E P S E A E I S H T Q K
TTCCACCCGAGGTGCTGTGTTTGAGCCATCAGAAGCAGAGATCTCCACACCCAAAAG
A T L V C L A T G F F P D H V E L S W W
GCCACACTGGTGTGCCTGGCCACAGGCTTCTTCCCTGACCACGTGGAGCTGAGCTGGTGG
V N G K E V H S G V S Q D P Q P L K E Q
GTGAATGGGAAGGAGGTGCACAGTGGGGTCAGCCAGGACCCGAGCCCTCAAGGAGCAG
P A L N D S R Y S L S S R L R V S A T F
CCCGCCCTCAATGACTCCAGATACAGCCTGAGCAGCCGCTGAGGGTCTCGGCCACCTTC
W Q N P R N H F R C Q V Q F Y G L S E N
TGGCAGAACCCCGCAACCACTTCCGCTGTCAAGTCCAGTTCTACGGGCTCTCGGAGAAT
D E W T Q D R A K P V T Q I V S A E A W
GACGAGTGGACCCAGGATAGGGCCAAACCTGTACCCAGATCGTCAGCGCCGAGGCCTGG
<TCR beta linker c-fos>
G R A D P G G L T D T L Q A E T D Q L E
GGTAGAGCAGACcccgggGGTCTGACTGATACACTCCAAGCGGAGACAGATCAACTTGAA
D K K S A L Q T E I A N L L K E K E K L
GACAAGAAGTCTGCGTTGCAGACCGAGATTGCCAATCTACTGAAAGAGAAGGAAAACTA
E F I L A A Y *
GAGTTCATCCTGGCAGCTTACTAG

Figure 16

TCR alfa>
 M Q K E V E Q N S G P L S V P E G A I A
 atgCAGAAGGAAGTGGAGCAGAACTCTGGACCCCTCAGTGTTCAGAGGGAGCCATTGCC

 S L N C T Y S D R G S Q S F F W Y R Q Y
 TCTCTCAACTGCACCTTACAGTGCACCGAGGTTCCAGTCTTCTCTCTGGTACAGACAATAT

 S G K S P E L I M S I Y S N G D K E D G
 TCTGGGAAAAGCCCTGAGTTGATAATGTCCATATACTCCAATGGTGACAAGACAGATGGA

 R F T A Q L N K A S Q Y V S L L I R D S
 AGGTTTACAGCACAGCTCAATAAAGCCAGCCAGTATGTTTCTCTGCTCATCAGAGACTCC

 Q P S D S A T Y L C A V T T D S W G K L
 CAGCCAGTGATTTCAGCCACCTACCTCTGTGCGGTTTACAACTCAGAGCTGGGGGAATTG

 Q F G A G T Q V V V T P D I Q N P D P A
 CAGTTTGGAGCAGGGACCCAGGTTGTGGTCACCCCAGATATCCAGAACCCCTGACCCCTGCC

 V Y Q L R D S K S S D K S V C L F T D F
 GTGTACAGCTGAGAGACTCTAAATCCAGTGACAAGTCTGTCTGCCTATTTCACCGATTTT

 D S Q T N V S Q S K D S D V Y I T D K T
 GATTCTCAACAATAATGTGTCAAAAGTAAGGATTCTGATGTGTATATCACAGACAAAAC

 V L D M R S M D F K S N S A V A W S N K
 GTGCTAGACATGAGGTCATGGACTTCAAGAGCAACAGTGTCTGTGGCTGGAGCAACAAA

 S D F A C A N A F N N S I I P E D T F F
 TCTGACTTTGCATGTGCAAAAGCCCTTCAACAACAGCATTATTCAGAGACACCTTCTTC

 <TCR alfa linker c-jun>
 P S P E S S P G G R I A R L E E K V K T
 CCCAGCCCAGAAAGTTCCcccgggGGTAGAATGCCCCGGCTGGAGCAAAAAGTGAAAACC

 L K A Q N S E L A S T A N M L R E Q V A
 TTGAAAGCTCAGAACTGGAGCTGGCGTCCACGGCCAACATGCTCAGGGAACAGGTGGCA

 Q L K Q K V M N Y *
 CAGCTTAAACAGAAAGTCATGAACCTACTAG

Figure 17

TCR beta>

M N A G V T Q T P K F Q V L K T G Q S M
atgAACGCTGGTGTCACTCAGACCCCAAAATTCCAGGTCTGAAGACAGGACAGGCATG

T L Q C A Q D M N H E Y M S W Y R Q D P
ACACTGCAGTGTGCCCAGGATATGAACCATGAATACATGTCTGGTATCGACAAGACCCA

G M G L R L I H Y S V G A G I T D Q G E
GGCATGGGGCTGAGGCTGATTCACTTACTCAGTGGTGGTGTATCACTGACCAAGGAGAA

V P N G Y N V S R S T T E D F P L R L L
GTCCCCAATGGCTACAATGTCTCCAGATCAACACAGAGGATTTCCCGCTCAGGCTGCTG

S A A P S Q T S V Y F C A S R P G L A G
TCGGCTGCTCCCTCCAGACATCTGTGTACTTCTGTGCCAGCAGGCGGGACTAGCGGGA

G R P E Q Y F G P G T R L T V T E D L K
GGGCGAACAGAGCAGTACTTCGGGCGGGGCAACAGGCTCACGGTACAGAGGACCTGAAA

N V F P P E V A V F E P S E A E I S H T
AAGGTGTTCACCCGAGGTGCTGTGTTCAGCCATCAGAAGCAGAGATCTCCACACC

Q K A T L V C L A T G F Y P D H V E L S
CAAAAGGCCACTGGTGTGCTGGCCACAGGCTTCTACCCCGACCAAGTGGAGCTGAGC

W W V N G K E V H S G V S T D P Q P L K
TGGTGGGTGAATGGGAAGGAGGTGCACAGTGGGGTCAGCACAGACCCGACGCCCCCTCAAG

E Q P A L N D S R Y A L S S R L R V S A
GAGCAGCCCGCCCTCAATGACTCCAGATAGCTCTGAGCAGCCGCTGAGGGTCTCGCC

T F W Q N P R N H F R C Q V Q F Y G L S
ACCTTCTGGCAGAACCCCGCAACCACTTCGCTGTCAAGTCCAGTTCACGGGCTCTCG

E N D E W T Q D R A K P V T Q I V S A E
GAGAATGACGAGTGGACCCAGGATAGGGCCAAACCTGTACCCAGATGTCAGCGCGAG

<TCR beta linker c-fos>

A W G R A D P G G L T D T L Q A E T D Q
CGCTGGGGTAGAGCAGACCCCGGGGGTCTGACTGATACACTCCAAGCGGAGACAGATCAA

Continued

Figure 18

TCR alfa>

M Q Q K N D D Q Q V K Q N S P S L S V Q
atgCAACAGAAGAATGATGACCAGCAAGTTAAGCAAAATTCAACATCCCTGAGCGTCCAG

E G R I S I L N C D Y T N S M F D Y F L
GAAGGAAGAATTTCTATTTCTGAACGTGCTACTATACTAACAGCATGTTTGATTATTTTCTA

W Y K K Y P A E G P T F L I S I S S I K
TGGTACAAAAATACCTGCTGAAGGTCCTACATTCCTGATATCTATAAGTTCATTAAAG

D K N E D G R F T V F L N K S A K H L S
GATAAAATGAAGATGGAAGATTCAGTGTCTTCTTAAACAAAAGTGCCAAGCACCTCTCT

L H I V P S Q P G D S A V Y F C A A M E
CTGCACATTGTGGCCCTCCAGCCTGGAGACTCTGCAGTGTACTTCTGTGCAGCAATGGAG

G A Q K L V F G Q G T R L T I N P N I Q
GGAGCCCAGAAGCTGGTATTTGGCCAAGGAACCAGGCTGACTATCAACCCAAATATCCAG

N P D P A V Y Q L R D S K S S D K S V C
AACCCCTGACCCCTGGCGTGTACCAGCTGAGAGACTCTAAATCCAGTGACAAGTCTGTCTGC

L F T D F D S Q T N V S Q S K D S D V Y
CTATTACCGATTTTGATTCTCAAAACAATGTGTACAAAGTAAGGATTTCTGATGTGTAT

I T D K T V L D M R S M D F K S N S A V
ATCACAGACAAAATGTGTCTAGACATGAGGCTATGACTTCAAGAGCAACAGTGTCTGTG

A W S N K S D F A C A N A F N N S I I P
GCCTGGAGCAACAAATCTGACTTTGCATGTGCAAAAGCCTTCAACAACAGCATTATTCOA

<TCR alfa linker c-jun>

E D T F F P S P E S S P G G R I A R L E
GAAGACACCTTCTTCCCCAGCCAGAAAGTTCCcgggGGTAGAATGCCCCGGCTGGAG

E K V K T L K A Q N S E L A S T A N M L
GAAAAAGTGAAAACCTTGAAAGCTCAGAACTCGGAGCTGGCGTCCACGGCCAACATGCTC

R E Q V A Q L K Q K V M N Y *
AGGGAACAGGTGGCACAGCTTAAACAGAAAGTCATGAACACTACTAG

Figure 19

TCR beta>

M N A G V T Q T P K F Q V L K T G Q S M
atgAAGCTGGTGTCACTCAGACCCCAAAATTCAGGTCCTGAAGACAGGACAGAGCATG

T L Q C A Q D M N H E Y M S W Y R Q D P
ACACTGCAGTGTGCCAGGATATGAACCATGAATACATGTCTGGTATGACAAGACCCA

G M G L R L I H Y S V G A G I T D Q G E
GGCATGGGGCTGAGGCTGATTCACTCAGTTGGTGTCTGGTATCACTGACCAAGGAGAA

V P N G Y N V S R S T T E D F P L R L L
GTCCCCAATGGCTACAATGTCTCCAGATCAACCACAGAGATTTCCTCGCTCAGGCTGCTG

S A A P S Q T S V Y F C A S S Y P G G G
TGGCTGTCTCCCTCCAGACATCTGTGTACTTCTGTGCCAGCAGTTACCaGGaGGGGGGG

F Y E Q Y F G P G T R L T V T E D L K N
TTTTACGAGCAGTACTTGGGGCCGGCCACCAGGCTCAGGTCACAGAGGACCTGAAAAAC

V F P P E V A V F E P S E A E I S H T Q
GTGTTCCCAACCGAGGTGGCTGTGTGTTGAGCCATCAGAAGCAGAGATCTCCACACCCAA

K A T L V C L A T G F Y P D H V E L S W
AAGGCCACACTGGTGTGGCTGGCCACAGGCTTCTACCCCGACCACGTGGAGCTGAGCTGG

W V N G K E V H S G V S T D P Q P L K E
TGGGTGAATGGGAAGCAGGTGCACAGTGGGGTCAGCACAGACCCGCAGCCCTCAAGGAG

Q P A L N D S R Y A L S S R L R V S A T
CAGCCCCGCCCTCAATGACTCCAGATAC~~act~~CTGAGCAGCCGCCCTGAGGGTCTCGGCCACC

F W Q D P R N H F R C Q V Q F Y G L S E
TTCTGGCAGgACCCCCGCAACCACTTCCGCTGTCAAGTCCAGTTCTACGGGCTCTCGGAG

N D E W T Q D R A K P V T Q I V S A E A
AATGACGAGTGGACCCAGGATAGGGCCAAACCCGTCACCCAGATCGTCAGCGCCGAGGCC

Continued.....

Figure 19 (continued)

<TCR beta linker c-fos>

W G R A D P G G L T D T L Q A E T D Q L
 TGGGGTAGAGCAGACcccgggGGTCTGACTGATACACTCCAAGCGAGACAGATCAACTT

E D K K S A L Q T E I A N L L K E K E K
 GAAGACAAGAAGTCTGGGTTCAGACCGAGATTGCCAATCTACTGAAAGAGAAGGAAAAA

linker Biotinylation tag>

L E F I L A A Y G S G G G L N D I F E A
 CTAGAGTTCATCTGGCAGCTTACggatccGGTGGTGGTCTGAACGATATTTTGAAGCT

Q K I E W H *
 CAGAAAATCGAATGGCATTAAAGCTT

Figure 20

TCR beta>
M N A G V T Q T P K F Q V L K T G Q S M
atgAAOCTGGTGTCACTCAGACCCCAAATTCAGGTCTGAAGACAGGACAGAGCATG

T L Q C A Q D M N H E Y M S W Y R Q D P
ACACTGCAGTGTGCCAGGATATCAACCATGAATACATGTCTGGTATCGACAAGACCCA

G M G L R L I H Y S V G A G I T D Q G E
GGCATGGGCTGAGGCTGATTCACTACTCAGTTGGTGTCTGGTATCACTGACCAAGGAGAA

V P N G Y N V S R S T T E D F P L R L L
GTCCCCAATGGCTACAATGTCTCAGATCAACCACAGAGGATTTCCCGCTCAGGCTGCTG

S A A P S Q T S V Y F C A S R P G L A G
TOGGCTGTCTCTCCAGACATCTGTGTACTTCTGTGOCAGCAGGCGGGACTAGCGGGA

G R P E Q Y F G P G T R L T V T E D L K
GGGOCACAGAGCAGTACTTCCGGCCGGGCACCAGGCTCACGGTCACAGAGGACCTGAAA

N V F P P E V A V F E P S E A E I S H T
AACGTGTTCACCACCGAGGTCTGTGTGTGAGCCATCAGAAGCAGAGATCTCCACACC

Q K A T L V C L A T G F Y P D H V E L S
CAAAAGGCCACACTGGTGTGCTGGCCACAGGCTTCTACCCCGACCACTGGAGCTGAGC

W W V N G K E V H S G V S T D P Q P L K
TGGTGGGTGAATGGGAAGGAGGTGCACAGTGGGGTCAGCACAGACCCCGAGCCCCCTCAAG

E Q P A L N D S R Y A L S S R L R V S A
GAGCAGCCCCCTCAATGACTCCAGATAC~~gct~~CTGAGCAGCCGCTGAGGGTCTGGCC

T F W Q D P R N H F R C Q V Q F Y G L S
ACCTTCTGGCAGgACCCCCGCAACCACTTCCGCTGTCAAGTCCAGTTCTACGGGCTCTCG

E N D E W T Q D R A K P V T Q I V S A E
GAGAATGACGAGTGGACCCAGGATAGGGCCAAACCTGTACCCAGATCGTCAGCGCCGAG

Continued.....

TCR beta linker c-fos
 A W G R A D P G G L T D T L Q A E T D Q
 GOCTGGGGTAGAGCAGACcccgggGGTCTGACTGATCACTCCAAGCGAGACAGATCAA

 L E D K K S A L Q T E I A N L L K E K E
 CITGAAAGACAAGAAGTCTGGTGTGCAGACCGAGATTGCCAATCTACTGAAAGAGAAGGAA

linker Biotinylation tag
 K L E F I L A A Y G S G G G L N D I F E
 AAACTACAGTTTCATCTGCGAGCTTACggatccGGTGGTGGTCTGAACGATATTTTTTGAA

 A Q K I E W H *
 GCTCAGAAAATCGAATGGCATTAAGCTTT

<TCR beta linker c-fos>

A W G R A D P G G L T D T L Q A E T D Q
G C T T G G G T A G A G C A G A C c c c o g g g G G T C T G A C T G A T A C A C T C C A A G C G G A G A C A G A T C A A

LEDKKSALQTEIANLLKEKE
CTTGAAGACAAGAGTCTGGTTGCAGACCGACATTGCCAATCTACTGAAAGAGAAGGAA

linker Biotinylation tag

K L E F I L A A Y G S G G G L N D I F E
AAACTAGAGTTTCATCTGGCAGCTTACgggatccGGTGGTGGTCTGAACGATATTTTGA

A Q K I E W H *
GCTCAGAAAATCGAATGGCATTAAAGCTT

Figure 21

Linker<-> fos

P G G L T D T L Q A E T D Q
 5'- ccc ggg GGT CTG ACT GAT ACA CTC CAA GCG GAG ACA GAT CAA
 Xma I

L E D K K S A L Q T E I A N L
 CTT GAA GAC AAG AAG TCT GCG TTG CAG ACC GAG ATT GCC AAT CTA

<-lin
 L K E K E K L E F I L A A Y G
 CTG AAA GAG AAG GAA AAA CTA GAG TTC ATC CTG GCA GCT TAC gga
 Bam

Ker-> <- biotinylation tag

S G G G L N D I F E A Q K I E
tcc GGT GGT GGT CTG AAC GAT ATT TTT GAA GCT CAG AAA ATC GAA
 HI

W H *
 TGG CAT TAA GCT T -3'
 Hind III

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Figure 22

A

Reverse primer:

5'-ACACAC GGA TCC GTA AGC TGC GAC GAT GAA CTC GAT TTT CTT-
3'

Bam HI

TOE T F " S E E T F O O T

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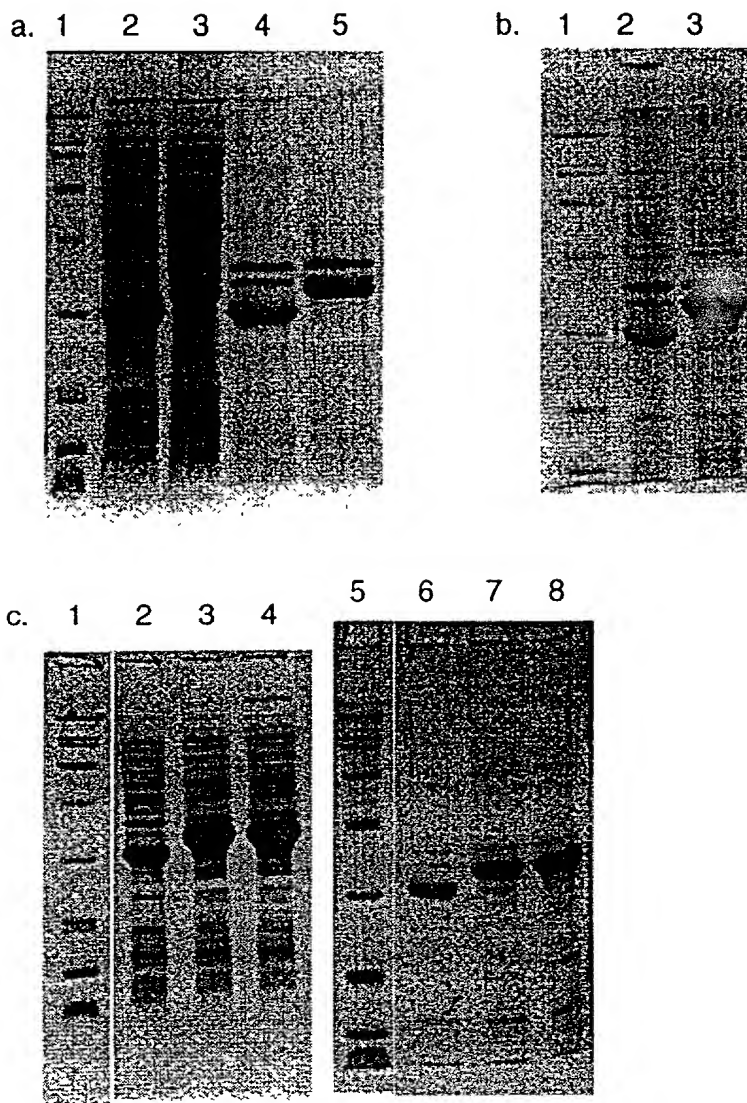


Figure 23

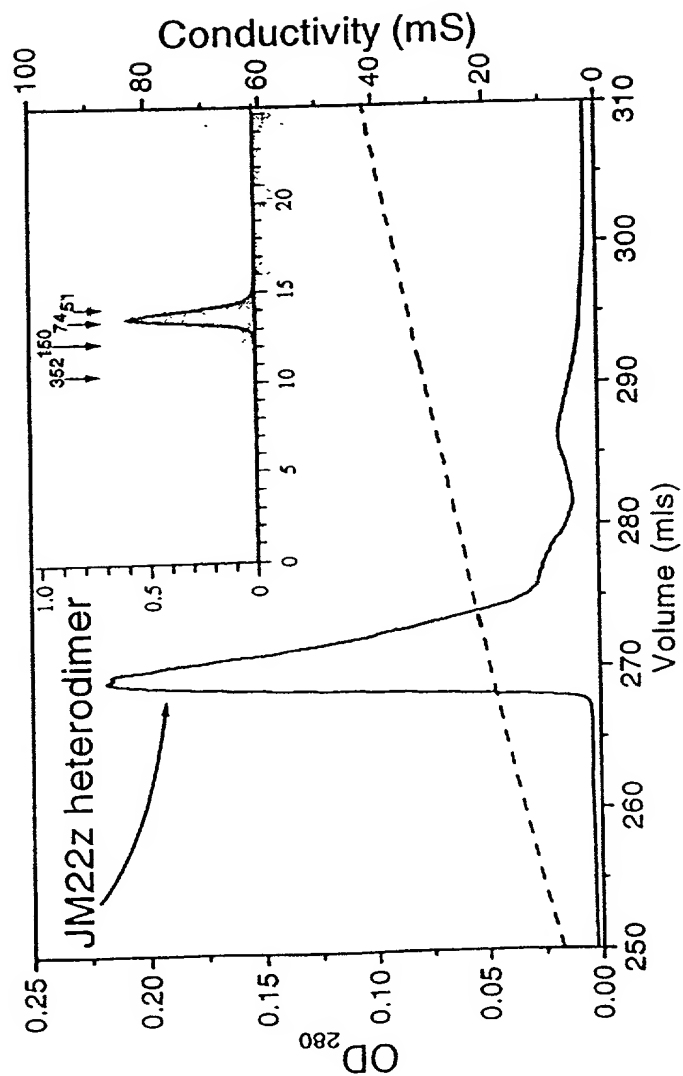


Figure 24.

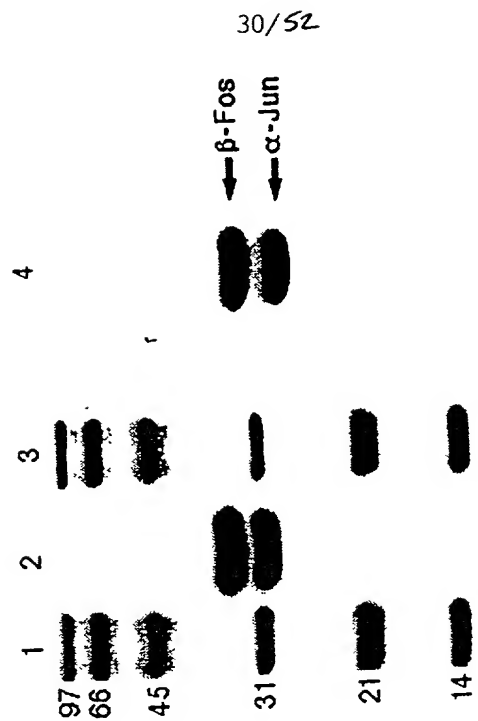
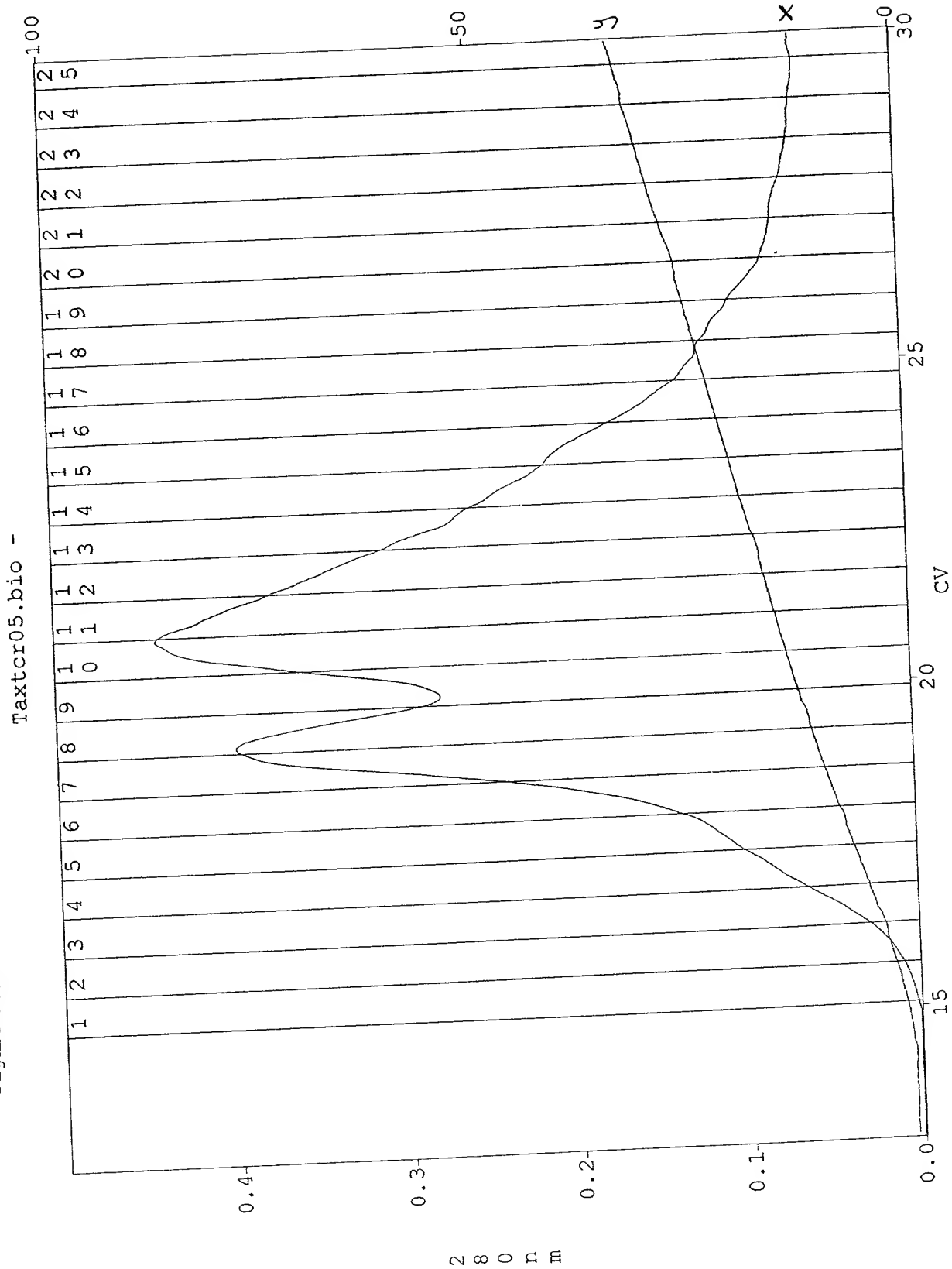


Figure 25.

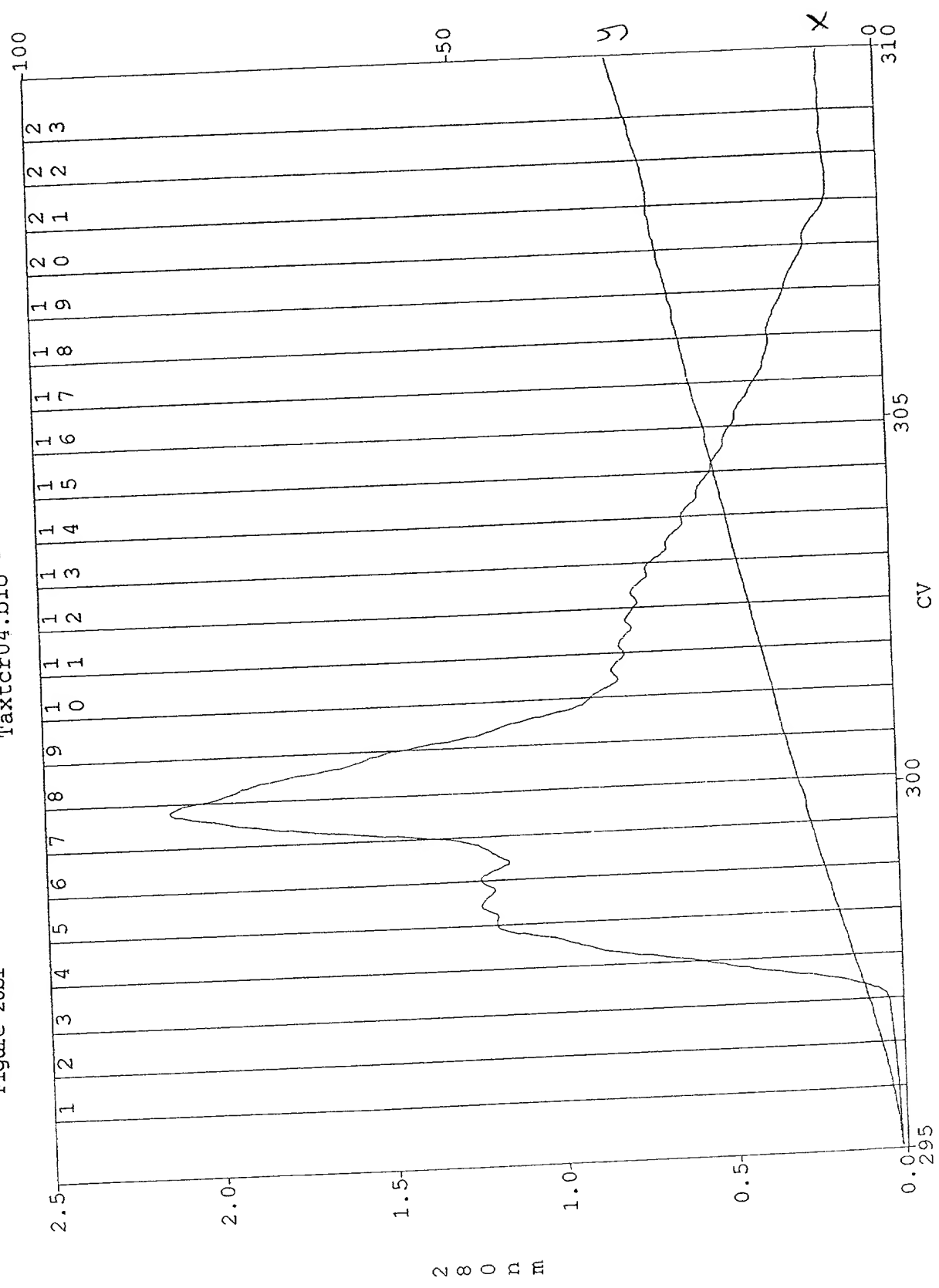
Figure 26ai



FILE "CECT00"

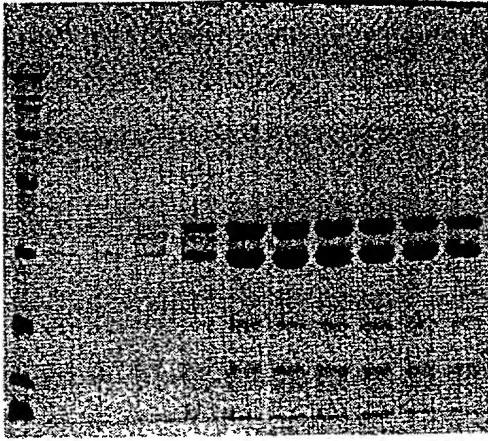
Figure 26bi

Taxtcr04.bio -



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m s

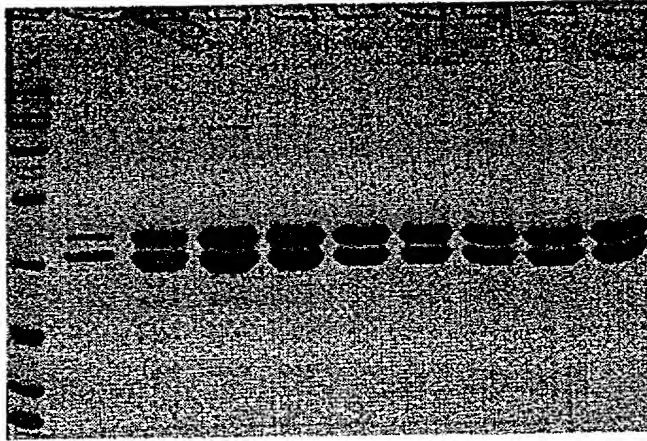
a.ii. 1 2 3 4 5 6 7 8 9 10 11



a.iii. 1 2



b.ii. 1 2 3 4 5 6 7 8 9 10



b.iii. 1 2 3

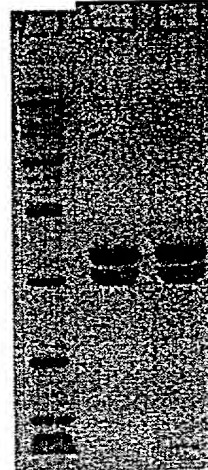


Figure 26

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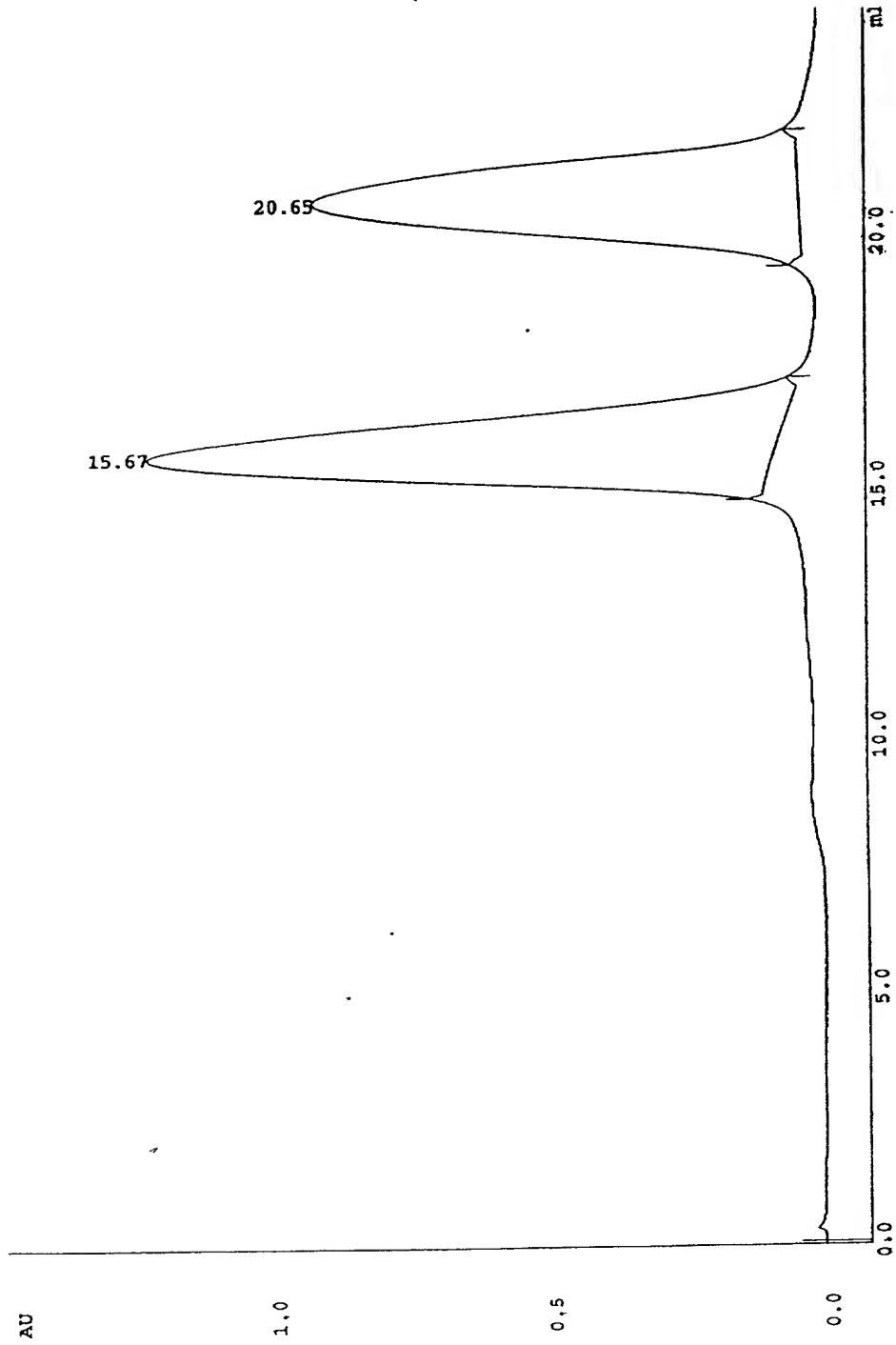


Figure 27

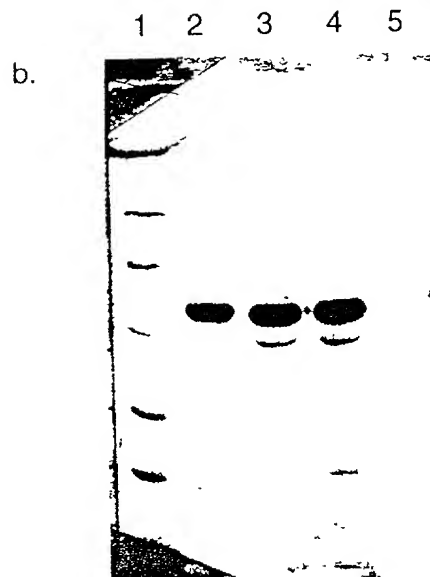
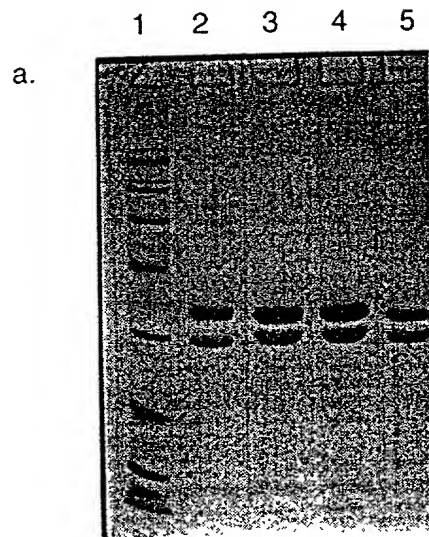


Figure 28

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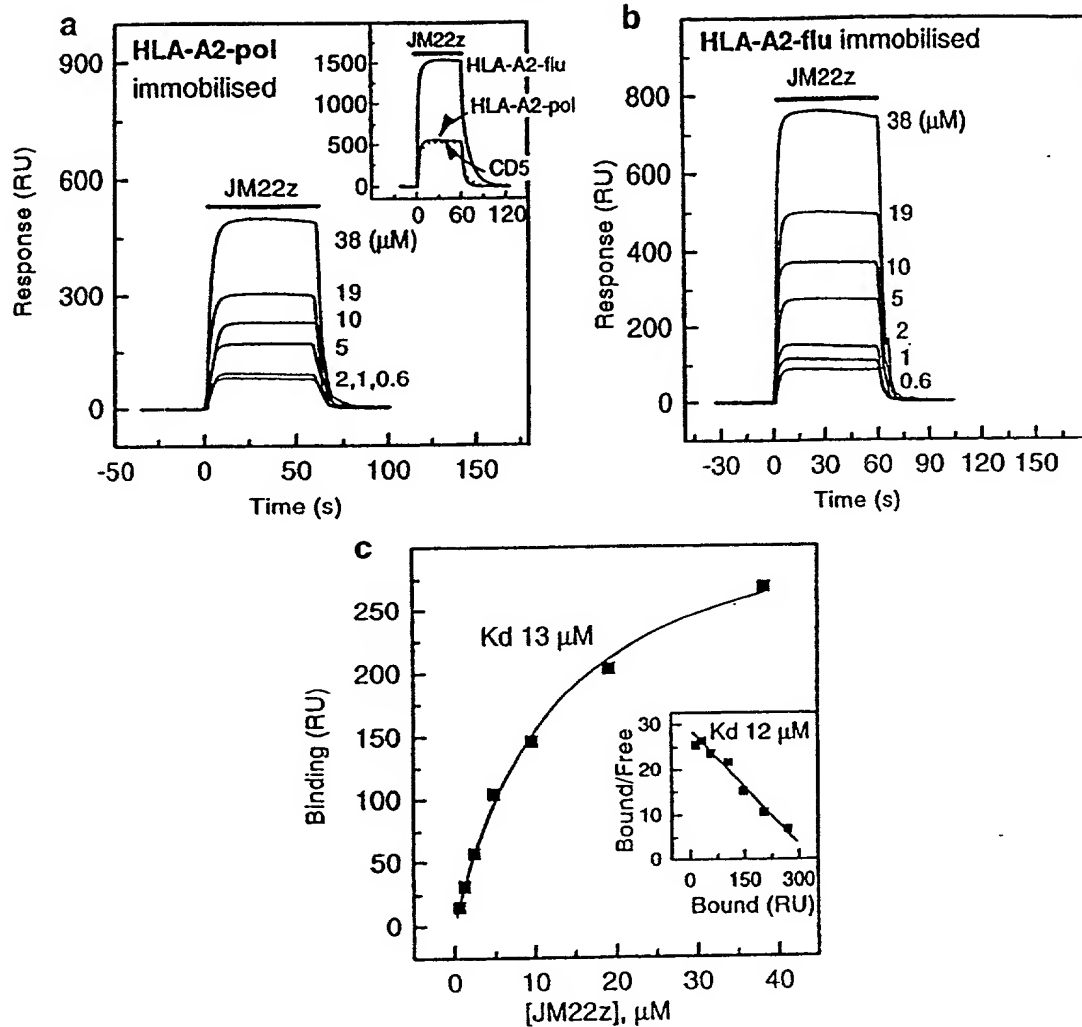


Figure 29

Figure 30

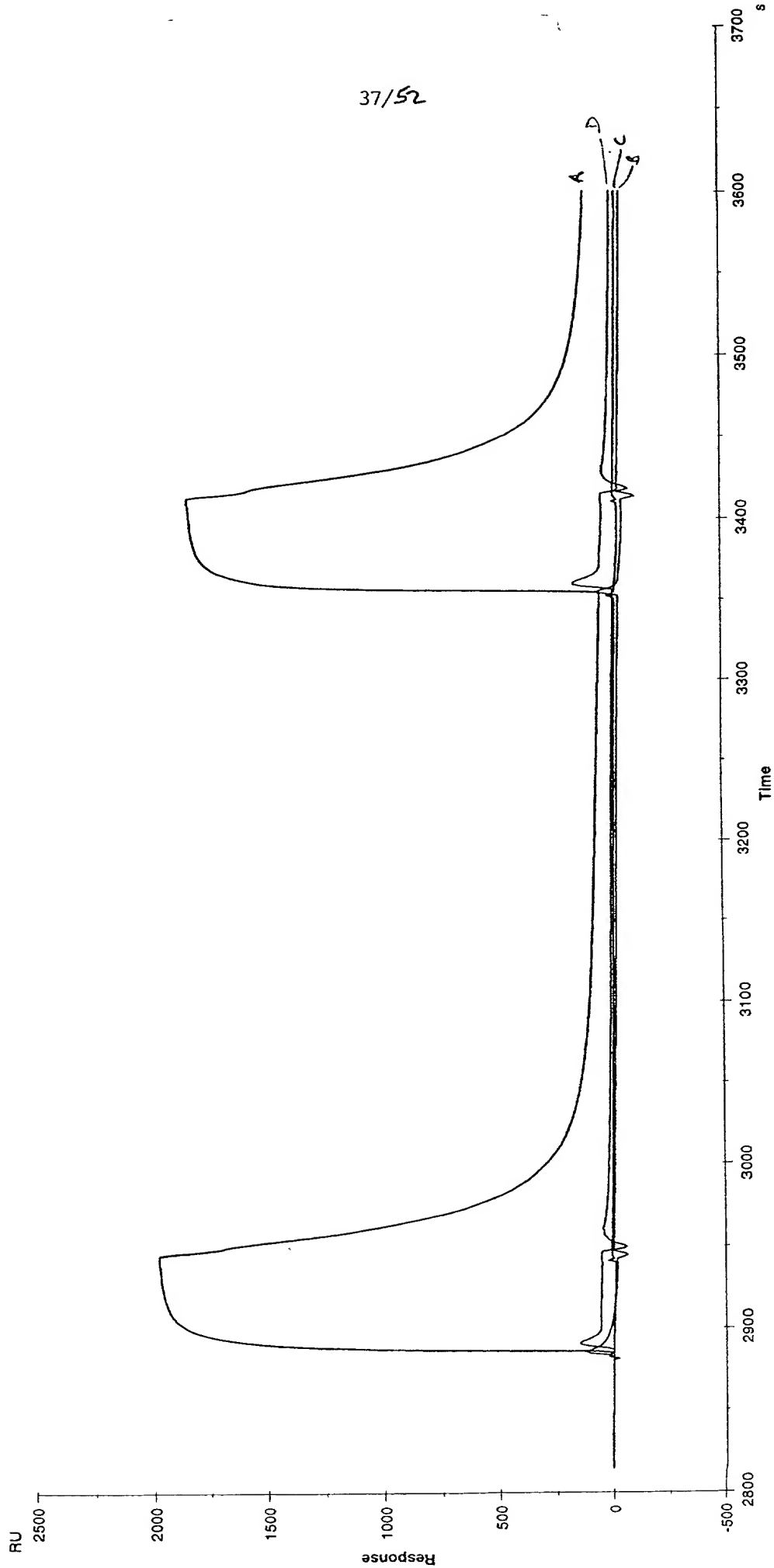
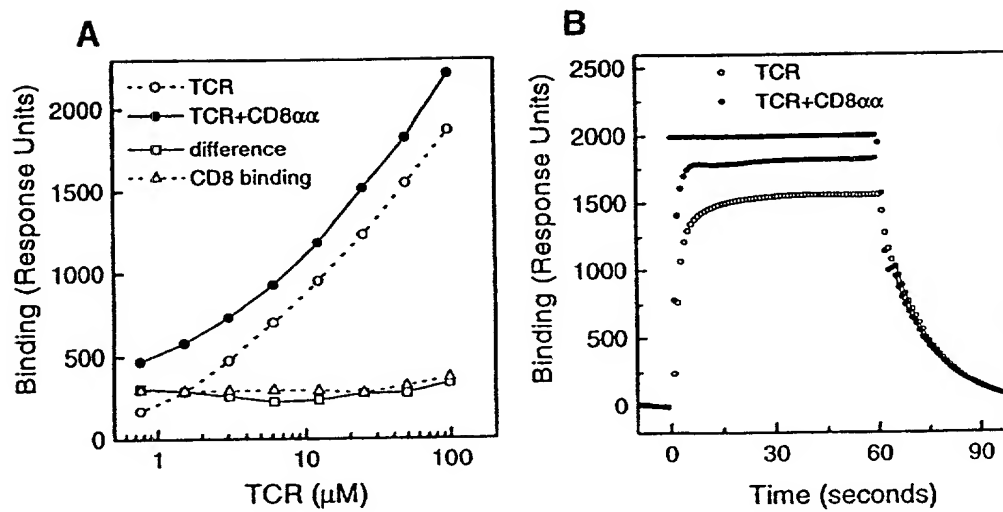


Figure 31



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FIGURE 32

TCR alfa>
M Q L L E Q S P Q F L S I Q E G E N L T
ATGCAaCTaCTaGAaCAaAGtCCTCAGTTTCTAAGCATCCAAGAGGGAGAAAATCTCACT

V Y C N S S S V F S S L Q W Y R Q E P G
GTGTACTGCAACTCCTCAAGTGTTTTTCCAGCTTACAATGGTACAGACAGGAGCCTGGG

E G P V L L V T V V T G G E V K K L K R
GAAGGTCTGTCTCTCTGGTGACAGTAGTTACGGGTGGAGAAGTGAAGAAGCTGAAGAGA

L T F Q F G D A R K D S S L H I T A A Q
CTAACCTTTTCAGTTTGGTGATGCAAGAAAGGACAGTTCTCTCCACATCACTGCGGCCAG

P G D T G L Y L C A G A G S Q G N L I F
CCTGGTGATACAGGCCTCTACCTCTGTGCAGGAGCGGGAAGCCAAGGAAATCTCATCTTT

G K G T K L S V K P N I Q N P D P A V Y
GGAAAAGGCACTAAACTCTCTGTAAACCAAATATCCAGAACCCTGACCCTGCCGTGTAC

Q L R D S K S S D K S V C L F T D F D S
CAGCTGAGAGACTCTAAATCCAGTGACAAGTCTGTCTGCCTATTCACCGATTTTGATTCT

Q T N V S Q S K D S D V Y I T D K T V L
CAAAACAATGTGTCAAAAGTAAGGATTCTGATGTGTATATCACAGACAAAATGTGCTA

D M R S M D F K S N S A V A W S N K S D
GACATGAGGTCTATGGACTTCAAGAGCAACAGTGCTGTGGCCTGGAGCAACAAATCTGAC

F A C A N A F N N S I I P E D T F F P S
TTTGCATGTGCAAACGCCTTCAACAACAGCATTATTCCAGAAGACACCTTCTTCCCCAGC

<TCR alfa linker c-jun>
P E S S P G G R I A R L E E K V K T L K
CCAGAAAGTTCCccccgggGGTAGAATCGCCCGGCTGGAGGAAAAAGTGAAAACCTTGAAA

A Q N S E L A S T A N M L R E Q V A Q L
GCTCAGAACTCGGAGCTGGCGTCCACGGCCAACATGCTCAGGGAACAGGTGGCACAGCTT

K Q K V M N Y *
AAACAGAAAGTCATGAACCTACTAG

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FIGURE 33

TCR beta>

M V D G G I T Q S P K Y L F R K E G Q N
ATGGTGGATGGTGAATCACTCACTCCCCAAAGTACCTGTTCAGAAAGGAAGGACAGAAT

V T L S C E Q N L N H D A M Y W Y R Q D
GTGACCCTGAGTTGTGAACAGAATTTGAACCACGATGCCATGTACTGGTACCGACAGGAC

P G Q G L R L I Y Y S Q I V N D F Q K G
CCAGGGCAAGGGCTGAGATTGATCTACTACTCACAGATAGTAAATGACTTTCAGAAAGGA

D I A E G Y S V S R E K K E S F P L T V
GATATAGCTGAAGGGTACAGCGTCTCTCGGGAGAAGAAGGAATCCTTTCCTCTCACTGTG

T S A Q K N P T A F Y L C A S S S R S S
ACATCGGCCCAAAGAACCCGACAGCTTTCTATCTCTGTGCCAGTAGTTCGAGGAGCTCC

Y E Q Y F G P G T R L T V T E D L K N V
TACGAGCAGTACTTCGGGCCGGGCACCAGGCTCACGGTCACAGAGGACCTGAAAAACGTT

F P P E V A V F E P S E A E I S H T Q K
TTCCACCCGAGGTCGCTGTGTTTGAACCATCAGAAGCAGAGATCTCCACACCCAAAAG

A T L V C L A T G F Y P D H V E L S W W
GCCCACTGGTGTGCCTGGCCACAGGCTTCTACCCCGACCACGTGGAGCTGAGCTGGTGG

V N G K E V H S G V S T D P Q P L K E Q
GTGAATGGGAAGGAGGTGCACAGTGGGGTCAGCACAGACCCGCAGCCCCTCAAGGAGCAG

P A L N D S R Y S L S S R L R V S A T F
CCCGCCCTCAATGACTCCAGATACTCCCTGAGCAGCCGCCTGAGGGTCTCGGCCACCTTC

W Q N P R N H F R C Q V Q F Y G L S E N
TGGCAGAACCCCGCAACCACTTCCGCTGTCAAGTCCAGTCTACGGGCTCTCGGAGAAT

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TCR beta

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D E W T Q D R A K P V T Q I V S A E A W
GACGAGTGGACCCAGGATAGGGCCAAACCTGTCACCCAGATCGTCAGCGCCGAGGCCTGG
<TCR beta linker c-fos>
G R A D P G G L T D T L Q A E T D Q L E
GGTAGAGCAGACcccgggGGTCTGACTGATACACTCCAAGCGGAGACAGATCAACTTGAA

D K K S A L Q T E I A N L L K E K E K L
GACAAGAAGTCTGCGTTGCAGACCGAGATTGCCAATCTACTGAAAGAGAAGGAAAACTA

E F I L A A Y *
GAGTTCATCCTGGCAGCTTACTAG

FOE F F " G E E F O O F

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FIGURE 34

TCR beta>
M V D G G I T Q S P K Y L F R K E G Q N
ATGGTGGATGGTGAATCACTCAGTCCCCAAAGTACCTGTTCAGAAAGGAAGGACAGAAT

V T L S C E Q N L N H D A M Y W Y R Q D
GTGACCCTGAGTTGTGAACAGAATTGAACCACGATGCCATGTACTGGTACCGACAGGAC

P G Q G L R L I Y Y S Q I V N D F Q K G
CCAGGGCAAGGGCTGAGATTGATCTACTACTCACAGATAGTAAATGACTTTCAGAAAGGA

D I A E G Y S V S R E K K E S F P L T V
GATATAGCTGAAGGTACAGCGTCTCTCGGGAGAAGAAGGAATCCTTTCCTCTCACTGTG

T S A Q K N P T A F Y L C A S S S R S S
ACATCGGCCCAAGAACCCGACAGCTTTCTATCTCTGTGCCAGTAGTTCGAGGAGCTCC

Y E Q Y F G P G T R L T V T E D L K N V
TACGAGCAGTACTTCGGGCCGGGCACCAGGCTCACGGTCACAGAGGACCTGAAAAACGTT

F P P E V A V F E P S E A E I S H T Q K
TTCCCACCCGAGGTCGCTGTGTTTGAACCATCAGAAGCAGAGATCTCCACACCCAAAAG

A T L V C L A T G F Y P D H V E L S W W
GCCACACTGGTGTGCCTGGCCACAGGCTTCTACCCCGACCACGTGGAGCTGAGCTGGTGG

V N G K E V H S G V S T D P Q P L K E Q
GTGAATGGGAAGGAGGTGCACAGTGGGGTCAGCACAGACCCGCAGCCCCTCAAGGAGCAG

P A L N D S R Y S L S S R L R V S A T F
CCCGCCCTCAATGACTCCAGATACTCCCTGAGCAGCCGCTGAGGGTCTCGGCCACCTTC

W Q N P R N H F R C Q V Q F Y G L S E N
TGGCAGAACCCCGCAACCACTTCCGCTGTCAAGTCCAGTTCTACGGGCTCTCGGAGAAT

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D E W T Q D R A K P V T Q I V S A E A W
GACGAGTGGACCCAGGATAGGGCCAAACCTGTCACCCAGATCGTCAGCGCCGAGGCCTGG

<TCR beta linker c-fos>

G R A D P G G L T D T L Q A E T D Q L E
GGTAGAGCAGACcccgggGGTCTGACTGATACACTCCAAGCGGAGACAGATCAACTTGAA

D K K S A L Q T E I A N L L K E K E K L
GACAAGAAGTCTGCGTTGCAGACCGAGATTGCCAATCTACTGAAAGAGAAGGAAAACTA

linker Biotinylation tag>

E F I L A A Y G S G G G L N D I F E A Q
GAGTTCATCCTGGCAGCTTACggatccGGTGGTGGTCTGAACGATATTTTGAAGCTCAG

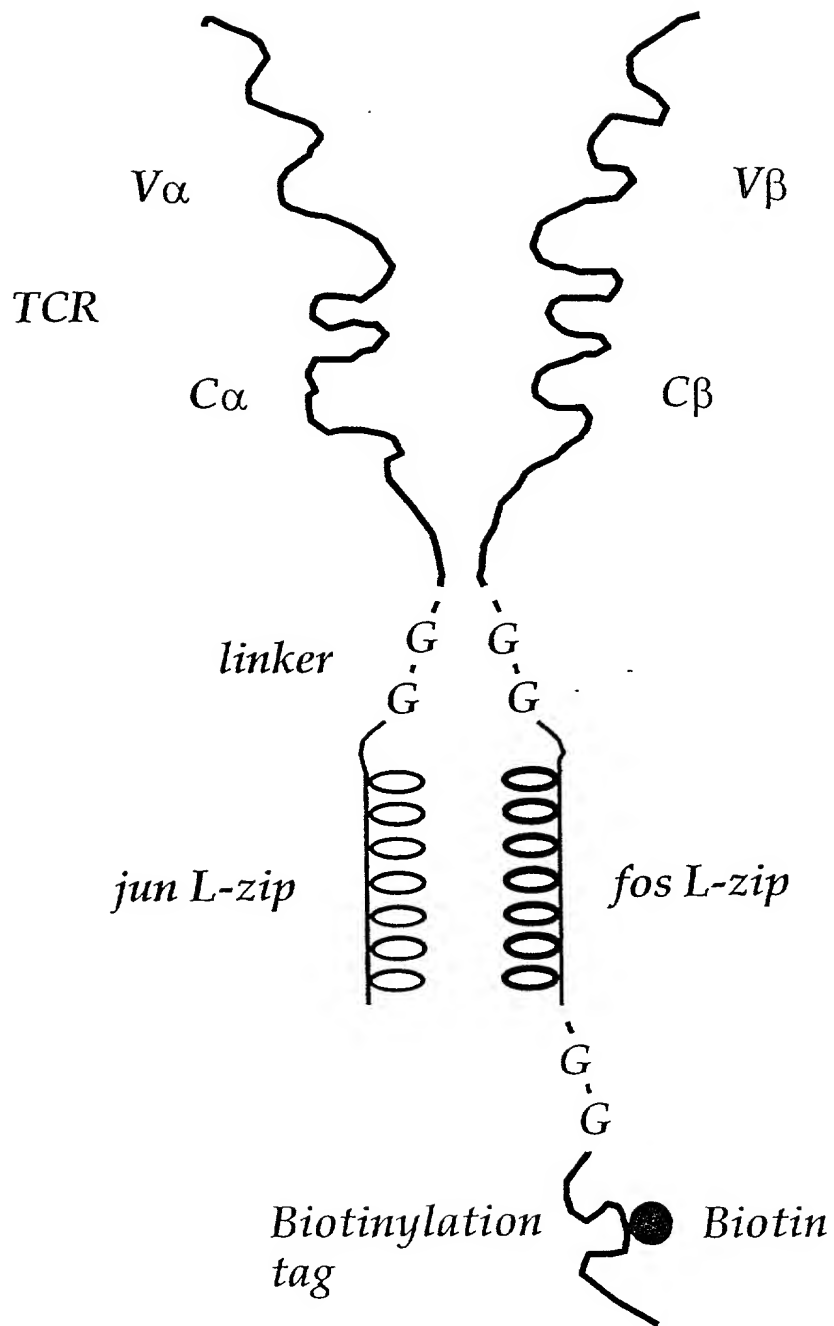
K I E W H *

AAAATCGAATGGCATTAA

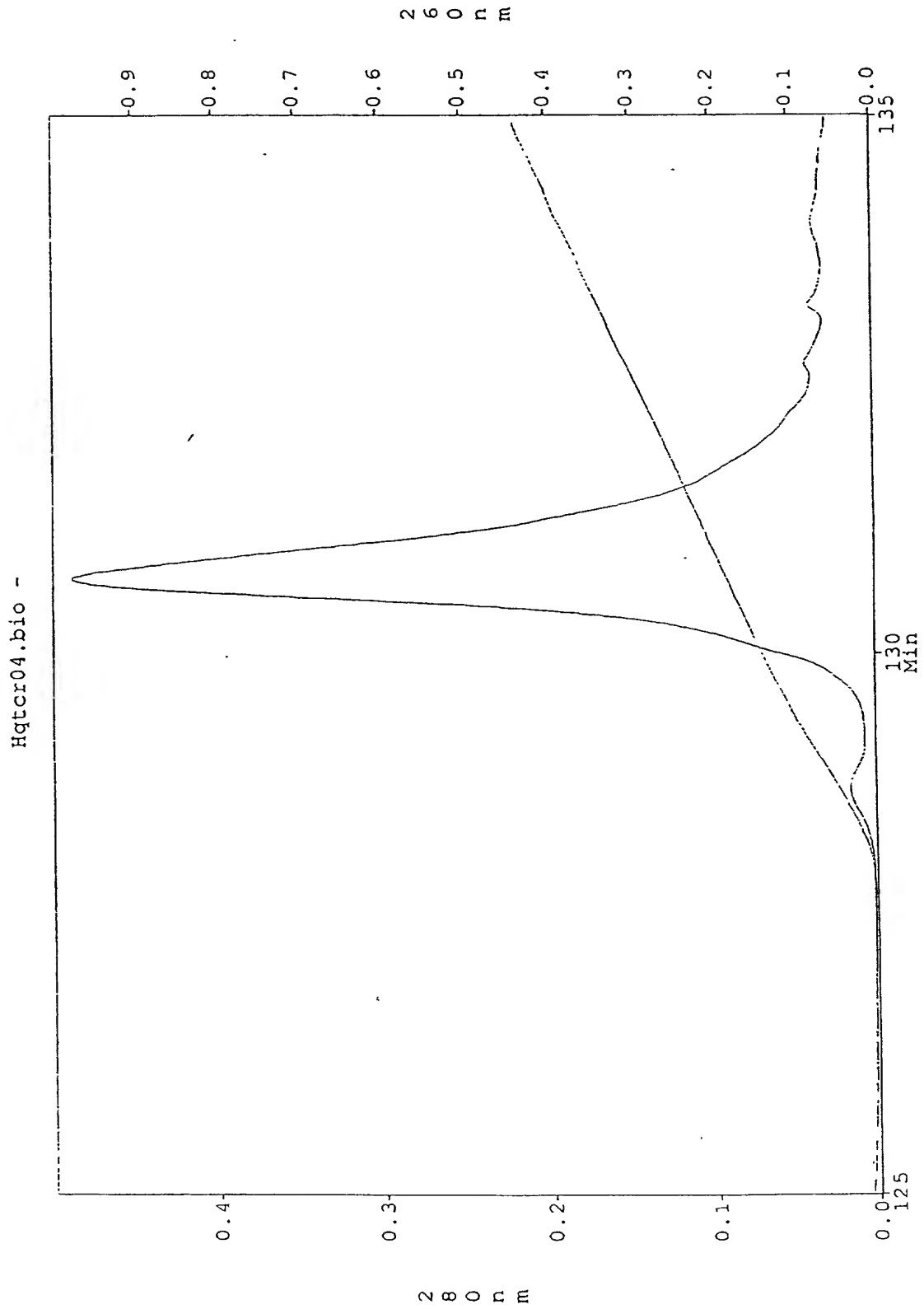
FOR SEQUENCING

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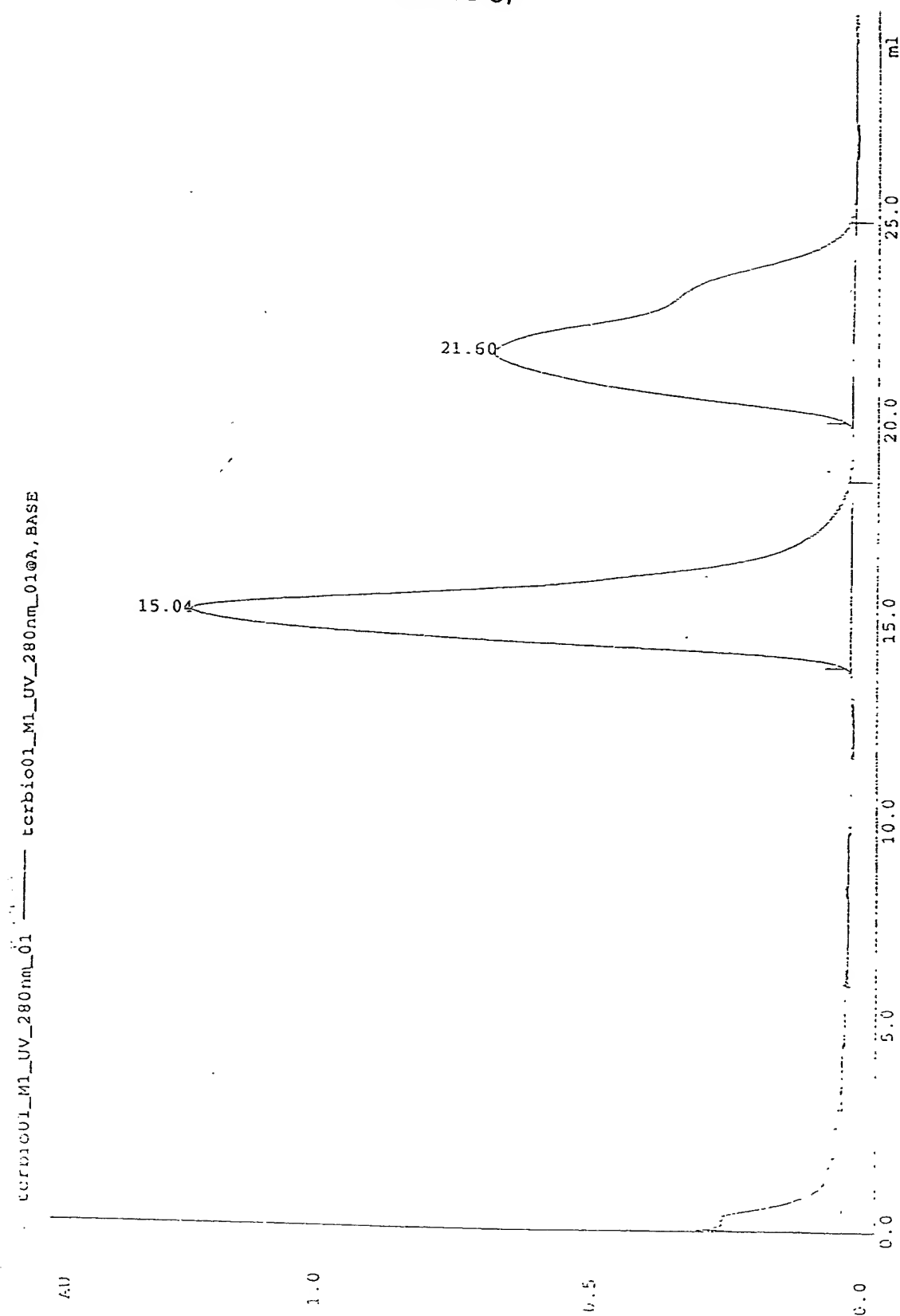
FIGURE 35



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FIGURE 36



46152
FIGURE 37



TOP SECRET

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FIGURE 38

TCR alfa>

M Q K E V E Q N S G P L S V P E G A I A
atgCAGAAGGAAGTGGAGCAGAACTCTGGACCCCTCAGTGTTCCAGAGGGAGCCATTGCC

S L N C T Y S D R G S Q S F F W Y R Q Y
TCTCTCAACTGCACTTACAGTGACCGAGGTTCCAGTCCTTCTTCTGGTACAGACAATAT

S G K S P E L I M S I Y S N G D K E D G
TCTGGGAAAAGCCCTGAGTTGATAATGTCCATATACTCCAATGGTGACAAAGAAGATGGA

R F T A Q L N K A S Q Y V S L L I R D S
AGGTTTACAGCACAGCTCAATAAAGCCAGCCAGTATGTTTCTCTGCTCATCAGAGACTCC

Q P S D S A T Y L C A V T T D S W G K L
CAGCCCAGTGATTACAGCCACCTACCTCTGTGCCGTTACAACTGACAGCTGGGGGAAATTG

Q F G A G T Q V V V T P D I Q N P D P A
CAGTTTGGAGCAGGGACCCAGGTTGTGGTCACCCAGATATCCAGAACCCTGACCCTGCC

V Y Q L R D S K S S D K S V C L F T D F
GTGTACCAGCTGAGAGACTCTAAATCCAGTGACAAGTCTGTCTGCCTATTACCGATTTT

D S Q T N V S Q S K D S D V Y I T D K T
GATTCTCAAACAAATGTGTCACAAAGTAAGGATTCTGATGTGTATATCACAGACAAAAC

V L D M R S M D F K S N S A V A W S N K
GTGCTAGACATGAGGTCTATGGACTTCAAGAGCAACAGTGCTGTGGCCTGGAGCAACAAA

S D F A C A N A F N N S I I P E D T F F
TCTGACTTTGCATGTGCAAACGCCTTCAACAACAGCATTATTCCAGAAGACACCTTCTTC

<TCR alfa linker c-jun>

P S P E S S P G G R I A R L E E K V K T
CCCAGCCCAGAAAGTTCCcccgggGGTAGAATCGCCCGGCTGGAGGAAAAAGTGAAAACC

L K A Q N S E L A S T A N M L R E Q V A
TTGAAGCTCAGAACTCGGAGCTGGCGTCCACGGCCAACATGCTCAGGGAACAGGTGGCA

Q L K Q K V M N Y *
CAGCTTAAACAGAAAGTCATGAACACTAG

TCR alpha "sequence"

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FIGURE 39

TCR beta>

M N A G V T Q T P K F Q V L K T G Q S M
atgAACGCTGGTGTCACTCAGACCCCAAATTCAGGTCCTGAAGACAGGACAGAGCATG

T L Q C A Q D M N H E Y M S W Y R Q D P
ACACTGCAGTGTGCCAGGATATGAACCATGAATACATGTCCTGGTATCGACAAGACCCA

G M G L R L I H Y S V G A G I T D Q G E
GGCATGGGGCTGAGGCTGATTCATTACTCAGTTGGTGCTGGTATCACTGACCAAGGAGAA

V P N G Y N V S R S T T E D F P L R L L
TGCCCCAATGGCTACAATGTCTCCAGATCAACCACAGAGGATTTCCCGCTCAGGCTGCTG

S A A P S Q T S V Y F C A S R P G L A G
TCGGCTGCTCCCTCCCAGACATCTGTGTACTTCTGTGCCAGCAGGCCGGGACTAGCGGGA

G R P E Q Y F G P G T R L T V T E D L K
GGGCGACCAGAGCAGTACTTCGGGCCGGGCACCAGGCTCACGGTCACAGAGGACCTGAAA

N V F P P E V A V F E P S E A E I S H T
AACGTGTTCACCCGAGGTCGCTGTGTTTGAGCCATCAGAAGCAGAGATCTCCACACC

Q K A T L V C L A T G F Y P D H V E L S
CAAAGGCCACACTGGTGTGCCTGGCCACAGGCTTCTACCCCGACCACGTGGAGCTGAGC

W W V N G K E V H S G V S T D P Q P L K
TGGTGGGTGAATGGGAAGGAGGTGCACAGTGGGGTCAGCACAGACCCGAGCCCCTCAAG

E Q P A L N D S R Y A L S S R L R V S A
GAGCAGCCCGCCCTCAATGACTCCAGATACgctCTGAGCAGCCGCCTGAGGGTCTCGGCC

T F W Q N P R N H F R C Q V Q F Y G L S
ACCTTCTGGCAGAACCCCGCAACCACTTCCGCTGTCAAGTCCAGTTCTACGGGCTCTCG

E N D E W T Q D R A K P V T Q I V S A E
GAGAATGACGAGTGGACCCAGGATAGGGCCAAACCTGTCACCCAGATCGTCAGCGCCGAG

<TCR beta linker c-fos>

A W G R A D P G G L T D T L Q A E T D Q
GCCTGGGGTAGAGCAGACcccgggGGTCTGACTGATACACTCCAAGCGGAGACAGATCAA

FOE F F " 9244 F00 F

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L E D K K S A L Q T E I A N L L K E K E
CTTGAAGACAAGAAGTCTGCGTTGCAGACCGAGATTGCCAATCTACTGAAAGAGAAGGAA

K L E F I L A A Y linker Biotinylation tag>
AAACTAGAGTTCATCCTGGCAGCTTACggatccGGTGGTGGTCTGAACGATATTTTGA

A Q K I E W H *
GCTCAGAAAATCGAATGGCATTAAAGCTT

1004336 494

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FIGURE 40

TCR alfa>

M Q Q K N D D Q Q V K Q N S P S L S V Q
atgCAACAGAAGAATGATGACCAGCAAGTTAAGCAAAATTCACCATCCCTGAGCGTCCAG

E G R I S I L N C D Y T N S M F D Y F L
GAAGGAAGAATTTCTATTCTGAACTGTGACTATACTAACAGCATGTTGATTATTTCTTA

W Y K K Y P A E G P T F L I S I S S I K
TGGTACAAAAAATACCCTGCTGAAGGTCTACATTCCTGATATCTATAAGTTCCATTAAG

D K N E D G R F T V F L N K S A K H L S
GATAAAATGAAGATGGAAGATTCAGTGTCTTCTTAAACAAAAGTGCCAAGCACCTCTCT

L H I V P S Q P G D S A V Y F C A A M E
CTGCACATTGTGCCCTCCCAGCTGGAGACTCTGCAGTGTACTTCTGTGCAGCAATGGAG

G A Q K L V F G Q G T R L T I N P N I Q
GGAGCCCAGAAGCTGGTATTTGGCCAAGGAACCAGGCTGACTATCAACCCAAATATCCAG

N P D P A V Y Q L R D S K S S D K S V C
AACCCTGACCCTGCCGTGTACCAGCTGAGAGACTCTAAATCCAGTGACAAGTCTGTCTGC

L F T D F D S Q T N V S Q S K D S D V Y
CTATTCACCGATTTTGATTCTCAAACAAATGTGTACAAAGTAAGGATTCTGATGTGTAT

I T D K T V L D M R S M D F K S N S A V
ATCACAGACAAAATGTGCTAGACATGAGGTCTATGGACTTCAAGAGCAACAGTGCTGTG

A W S N K S D F A C A N A F N N S I I P
GCCTGGAGCAACAAATCTGACTTTGCATGTGCAAACGCCTTCAACAACAGCATTATTCCA

<TCR alfa linker c-jun>

E D T F F P S P E S S P G G R I A R L E
GAAGACACCTTCTTCCCCAGCCCAGAAAGTTCCcccgggGGTAGAATCGCCCGGCTGGAG

E K V K T L K A Q N S E L A S T A N M L
GAAAAAGTGAAAACCTTGAAAGCTCAGAACTCGGAGCTGGCGTCCACGGCCAACATGCTC

R E Q V A Q L K Q K V M N Y *
AGGGAACAGGTGGCACAGCTTAAACAGAAAGTCATGAACTACTAG

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FIGURE 41

TCR beta>

M N A G V T Q T P K F Q V L K T G Q S M
atgAACGCTGGTGTCACTCAGACCCCAAAATCCAGGTCCTGAAGACAGGACAGAGCATG

T L Q C A Q D M N H E Y M S W Y R Q D P
ACACTGCAGTGTGCCAGGATATGAACCATGAATACATGTCTGGTATCGACAAGACCCA

G M G L R L I H Y S V G A G I T D Q G E
GGCATGGGGCTGAGGCTGATTACTCAGTTGGTGCTGGTATCACTGACCAAGGAGAA

V P N G Y N V S R S T T E D F P L R L L
TGCCCCAATGGCTACAATGTCTCCAGATCAACCACAGAGGATTTCCCGCTCAGGCTGCTG

S A A P S Q T S V Y F C A S S Y P G G G
TCGGCTGCTCCCTCCCAACATCTGTGTACTTCTGTGCCAGCAGTTACCaGgaGGGGGGG

F Y E Q Y F G P G T R L T V T E D L K N
TTTTACGAGCAGTACTTCGGGCCGGGCACCAGGCTCACGGTCACAGAGGACCTGAAAAAC

V F P P E V A V F E P S E A E I S H T Q
GTGTTCCACCCGAGGTCGCTGTGTTTGAGCCATCAGAAGCAGAGATCTCCACACCCAA

K A T L V C L A T G F Y P D H V E L S W
AAGGCCACACTGGTGTGCCTGGCCACAGGCTTCTACCCCGACCACGTGGAGCTGAGCTGG

W V N G K E V H S G V S T D P Q P L K E
TGGGTGAATGGGAAGGAGGTGCACAGTGGGGTCAGCACAGACCCGCAGCCCTCAAGGAG

Q P A L N D S R Y A L S S R L R V S A T
CAGCCCGCCCTCAATGACTCCAGATACgctCTGAGCAGCCGCCTGAGGGTCTCGGCCACC

F W Q D P R N H F R C Q V Q F Y G L S E
TTCTGGCAGgACCCCCGCAACCACTTCCGCTGTCAAGTCCAGTTCTACGGGCTCTCGGAG

N D E W T Q D R A K P V T Q I V S A E A
AATGACGAGTGGACCCAGGATAGGGCCAAACCCGTCACCCAGATCGTCAGCGCCGAGGCC

<TCR beta linker c-fos>

W G R A D P G G L T D T L Q A E T D Q L
TGGGGTAGAGCAGACcccgggGGTCTGACTGATACACTCCAAGCGGAGACAGATCAACTT

TCR beta " sequence"

Year	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

.. linker Biotinylation tag>
L E F I L A A Y G S G G G L N D I F E A
CTAGAGTTCATCCTGGCAGCTTACggatccGGTGGTGGTCTGAACGATATTTTGAAGCT

Q K I E W H *
CAGAAAATCGAATGGCATTAGCTT